SABBATICAL LEAVE REPORT

1980 - 1981

by

Agnes F. Garwacki

A SUMMARY REPORT

PRESENTED TO

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OCTOBER 1981

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Telephone: ~~(714) 598-2811~~
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March 3, 1980

Mrs. Agnes F. Garwacki
1071 Prospero Drive
Covina, CA 91722

Dear Mrs. Garwacki:

At the regular meeting of the Board of Trustees held Wednesday, February 20, 1980, the Board approved your application for Sabbatical Leave for the school year, 1980-81, to complete the following contracted program:

Formal study for the master's degree at the University of La Verne.

It is the purpose of a sabbatical leave to directly relate to the improvement of instruction and other programs of the College. Any deviation or change from the approved program, which is a contractual arrangement between yourself and the Board of Trustees of Mt. San Antonio College, must be approved by the Board. An unauthorized change will result in withdrawal of financial support. You will be notified in the near future when the contract is ready for signature.

Prior to your departure, you must submit a detailed outline of your study plan and, for travel, a complete itinerary. Following the leave, it is your responsibility to submit a comprehensive report of your activities with an evaluation of the positive effect it will have on your specific teaching assignment.

We hope this will be an outstanding experience for you, and greatly stimulate and enrich your contacts with the students in your classes.

Sincerely,

Max D. Bell

Max D. Bell
Director, Personnel

myw

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PURPOSE AND VALUE OF SABBATICAL LEAVE

The purpose of my sabbatical leave was to participate in formal study for a master's degree. It is with great pleasure that I report my completion of the requirements for this at The University of LaVerne.

There is no particular segment of my studies to which I can pinpoint as the most beneficial aspect of my sabbatical leave. It was an overall interlacing and blending of ideas, third force psychology, teaching and research techniques.

Education, according to Maslow, needs to place a greater emphasis on developing the individual's potential to understand self and others, to relate to them, to achieve the basic needs and to grow toward actualization. I wholeheartedly agree with this concept and it has helped me to renew and reinforce my attitudes. The utilization of these principles will continue to serve me as they are applied to the field of teaching.

I know that as a result of my self renewal, I can help my students to relate classroom instruction to life, not only in theory but experience and practice as well. They will need these tools and find the application of them necessary in the practice of nursing.

As a vocational nursing instructor, I found myself rather

isolated from other educational disciplines and my sabbatical leave afforded me the opportunity to grow professionally as well as personally.

The course of study pursued provided me with first hand awareness of many activities, issues and problems which occur in public education.

Educational institutions have been maligned, for too many years, as ineffective and wasteful and that the teachers within are too busy to care about students. I was very fortunate to have personal interaction with teachers and administrators from diverse backgrounds and experiences. This encounter proved to me the the earlier statement regarding teachers not caring is truly erroneous.

I was given a better understanding of what students experience under various educational systems, prior to admission to college. Great emphasis was placed on the implementation of diverse approaches to learning and how to utilize them for the student with low motivation, the late bloomer, as well as helping each student to build self esteem. Some of these include: A 1:1 ratio of student to teacher with the teacher keeping in mind that he/she by representing an authority figure, could bring about a negative experience;utilization of willing non judgmental peers on a 1:1 ratio or to serve as a group leader in a very small group setting; the teacher may also use this approach. Too frequently we,as teachers, repeat the same material over

and over rather than approach it from a different perspective for students with comprehension difficulties.

In my experiences at Mt. SAC, I can apply these techniques in my own classroom instruction. I feel better equipped to work with students who question their academic ability and self worth. It is my intention to work harder to help each student to strive for greater achievement until his/her full potential has been met.

There can only be positive reflections about the dedication of Mt. SAC instruction as these students pursue their vocational and educational goals and herein lies the intrinsic value of my sabbatical leave.

My graduate courses culminated with approval of the following submitted study.

UNIVERSITY OF LA VERNE LA VERNE, CALIFORNIA 91750

STUDENT'S PERMANENT RECORD FROM OFFICE OF THE REGISTRAR

CUMULATIVE RECORD

STUDENT: GARWACKI AGNES FESUK 22 3017
LAST FIRST MIDDLE OR MAIDEN SOCIAL SEC

Address: 1071 PROSPERO DR.

City, State, Zip: COVINA, CA 91722

Date	Sem Hrs. Completed	Scholastic Classification	Quality Points	G.P.A.	Post Grad. CRD.
		Freshman			
		Sophomore			
		Junior			
		Senior			

Degree Granted: MASTER OF EDUCATION DATE: AUGUST 24, 1981

Major:

Departmental Honors

U.G. Transf. S.H.:

U.S. Const. Req.:

Senior Comp. Passed:

1980	SUMMER I	CRS DESC	SEM HRS	
EDUC 501		TESTS AND MEASUREMENTS	3.000	A
		TOTAL --	3.000	

1980	SUMMER II	CRS DESC	SEM HRS	
SCMGT 573		SCHOOL-COMMUNITY RELATIONS	3.000	P
		TOTAL --	3.000	

1980	FALL SEM	CRS DESC	SEM HRS	
EDUC 570		ORGANIZATION OF EDUC PROGRM	3.000	A
EDUC 571		SCHOOL PERSONNEL MANAGEMENT	3.000	A
EDUC 671		PUB SCH GOVRNCE & LEGAL PRO	3.000	A
HCM 521		ORGAN OF HLTHCARE DEL SYSTM	3.000	A
		TOTAL --	12.000	

1981	SPRING SEM	CRS DESC	SEM HRS		
EDUC 503		EDUCATIONAL PSYCHOLOGY	3	A	12
EDUC 504		METHODS OF RESEARCH	3	B	9
EDUC 572		ADMINISTRATIVE LEADERSHIP	3	A	12
EDUC 670		PUBLIC SCHOOL MANAGEMENT	3	A	12
SEM GPA -- 3.75		TOTAL SEM HRS --	12	GPT-45	

1981	SUMMER II	CRS DESC	SEM HRS	
EDCUC 596		GRADUATE SEMINAR	2	CRD
		TOTAL --	2	

*CERTIFICATION OF EDUC 595.1-COMP EXAM-COMPLETED: 8/24/81

* MASTER OF EDUCATION

COMPLETED: AUGUST 24, 1981

THIS TRANSCRIPT IS OFFICIAL WHEN BEARING
THE OFFICIAL UNIVERSITY OF LA VERNE SEAL.
(Prior to January 1978 La Verne College)

OFFICIAL SEAL

This is a transcript of record consisting of __

UNIVERSITY OF LA VERNE
OFFICE OF THE REGISTRAR

1950 Third Street
La Verne, California 91750
714/593-3511
213/629-1066

DATE: SEPTEMBER 3, 1981

Dear La Verne Graduate:

Congratulations upon having completed your degree requirements at the University of La Verne. The official records indicate that you have completed all degree requirements as of AUGUST 24, 1981 . Your transcript reflects the above completion date.

Your diploma date is AUGUST 31, 1981 . Your diploma will be mailed to you approximately during the month of NOVEMBER 1981 . If you completed your degree work at one of the University of La Verne Residence Centers, your diploma should arrive at your Residence Center during the month mentioned above.

We wish you every success in all your future endeavors.

Thank you,

Marilyn S. Davies
MARILYN S. DAVIES
Registrar

Enclosure: One complimentary transcript copy.
(Additional transcript copies upon your written request at $3.00 per copy).

MSD:ld/3-9-81

THE UNIVERSITY OF LA VERNE

THE SCAT AND WONDERLIC TESTS AS SCREENING INSTRUMENTS FOR VOCATIONAL NURSING STUDENTS

A Paper Prepared for the Graduate Seminar
in Partial Fulfillment of
the Requirements for the Degree
Master of Education

by
Agnes F. Garwacki
July 1981

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CHAPTER I

THE PROBLEM

The ultimate goal of any educational institution is to produce a competent graduate and this goal is of utmost importance in programs which prepare students to enter the health occupation field. Projected estimates for increased manpower to provide adequate health care to the nation make it imperative that schools of vocational nursing continue to assume their responsibility to serve the public in a competent manner.

Many vocational nursing schools are presently faced with a greater number of applicants than can be accommodated. There is a direct relationship to financial limitations and hospital facilities.

What methodology can be utilized in determining the potential success of a specific applicant over another, who was rejected? Schools are concerned with choosing candidates who will succeed because a student who enters a program and fails to complete it represents a substantial loss of effort, money, and material resources for both the student and the community.

Importance of the Problem

Attrition for vocational nursing programs for the time period 1977-1979 was 31.9% (NLN Data Book, 1979).

It is estimated that in the next decade, 375,000 vocational nurses will be needed (NLN Data Book); therefore, the high attrition rate is of deep concern to all nursing educators.

Purpose of the Study

The purpose of the study was to identify any correlation between the variables (SCAT & Wonderlic Personnel Test) and student scores on the National League for Nursing Practical Nursing three Units of Content (TUC) and Nursing including Pharmacology (NIP) tests.

Definition of Terms

Correlation

Tendency for two or occasionally more variables to change values concomitantly. Note: evidence of correlation is not evidence of causation (Gronlund, 1976).

Correlation Coefficient

An index number which expresses the degree of relationship. It may take any value from 0.00 (no relationship) to

1.00, a perfect positive relationship or down to -1.00, a perfect negative relationship.

Multi Collinearity

A problem which occurs when two independent variables are significantly correlated so that standard ordinary least squares regression results are misleading.

CHAPTER II

REVIEW OF LITERATURE

A review of current literature on the use of group tests as screening instruments for vocational nursing students reveals a scarcity of information. The administration of tests has reached such proportions that it is rare to find an individual who has not been exposed to some form of testing, especially in the educational environment.

Tests and other instruments of evaluation can be classified as group or individual, depending on whether it is administered to a group of people at the same time or to each person individually. Evaluation techniques are selected, too frequently, on how accurately they measure, how objective the results, and how convenient the instrument is to use. These criteria are important, but secondary to the main criterion, which as stated is: Is this evaluation technique the best method for determining what one wants to know about a student (Gronlund, 1976)?

Group tests can be given and scored by individuals with little training and they may be administered to large numbers at a time. This is useful when conditions preclude the

administration of an individual test which is time consuming. The group test is usually scored in terms of items correct; the score is then compared with norms determined for a large group of individuals. Many group tests are not intelligence tests but achievement tests designed to measure knowledge in a specific area (Gronlund, 1976).

CHAPTER III

METHOD OF PROCEDURE

The author, as a faculty member, had access to student admission folders and departmental student records. These were surveyed to obtain data. The survey was done in the vocational nursing department at Mt. San Antonio College in Walnut, California. The time period covered three classes during the years of 1979-1980 (students are graduated twice a year). There were 111 subjects surveyed.

The variables collected are as follows.

1. Age. The students age in years at time of entrance to the program. There is the expectation that the older student will be more mature and self-disciplined and, therefore, more successful in his/her undertaking.

2. Education. The number of completed academic grades prior to admission into the program. The general expectation here is that the more education one has, the greater the chance for success.

3. SCAT. School and College Ability Tests. A test used as an aid to estimate students' ability to undertake the academic work of the next higher level of schooling. These

tests measure verbal and quantitative abilities which seem to be important for success in college endeavors. Students entering the Mt. SAC vocational nursing program are required to take this test prior to admission. The results are measured on a percentage scale of 1-99.

4. Wonderlic Personnel Test. A test designed and created for adults in business and industrial situations which has been useful in the selection, hiring, and placement of applicants in various occupations. It has been used as an indicator of future possibilities and is unique in that the test has been developed and standardized on subjects either applying for work or in the actual work situation. Most tests have been developed in an academic environment and transposed to business and industry (Wonderlic, 1966). This test is administered to all applicants of the program. A minimum score of 17% rank is used in accepting applicants.

5. TUC. The National League for Nursing Practical Nursing--Basic Achievement Test, three Units of Content. This test provides subscores in Body Structure and Function, Basic Nursing Procedures, Nutrition and Diet Therapy. It is administered to students at approximately the twelfth week of the second semester of the program.

6. NIP. The National League for Nursing Practical Nursing--Nursing including Pharmacology. Content provides subscores in maternal-child health, medical-surgical nursing, and pharmacology. Students are administered this test approx-

imately the twelfth week of the third semester.

Following are examples of information on collection cards utilized by the author.

Student Number	Age	Grade Completed	SCAT V Q T	Wonderlic	TUC	NIP
8	29	12	30-16-19	21	43	77
3	20	11	76-17-46	24	21	92
80	44	12	33-04-10	17	68	79
20	18	13	83-57-76	26	92	97
109	20	12	24-47-35	21	38	53
112	40	12	60-09-27	21	24	81
28	32	12	68-37-55	21	76	87

The computer program used was a statistical package originally written at the University of Chicago School of Business by Professors Ling and Roberts. The name of the package is IDA (Interactive Data Analysis). The computer hardware used was a DEC-10 Computer located at the Claremont Colleges in Claremont, California. The data were processed using multiple regression in ordinary least squares (OLS).

CHAPTER IV

RESULTS

The first step to analyze scores for the TUC and NIP is to derive the correlations between the independent variables (Age, Education, SCAT Total, SCAT-V, SCAT-Q, Wonderlic) and the dependent variables (TUC and NIP). After analyzing these correlations, those variables which seem to relate some degree of correlation were selected. A basic guideline to interpret the correlation coefficient (Cohen and Crowley (1967)) is as follows:

.00-.20 shows little or no relationship;

.20-.40 shows some slight relationship;

.40-.60 shows substantial relationship;

.60-.80 shows strong, useful relationship;

.80-1.00 shows high relationship.

The correlation matrix derived using the analyzed variables with all 111 observations is shown in Table 1.

In examining the relationship to the TUC scores, it is shown that all variables exhibit positive relationships but to varying degrees. The SCAT Total and SCAT-Verbal displayed strong correlations with values of .617 and .630 respectively. The Wonderlic score (.484) showed a substantial positive relationship. The SCAT-Q and age (.314 and .223) variables

were slightly correlated and oddly enough, education revealed little correlation (0.151).

To eliminate the statistical problem of multicollinearity, the SCAT (Total) was eliminated. Since the SCAT Total is comprised of a linear combination of the SCAT-V and SCAT-Q scores, it would be statistically in error to include all three (Pindyck and Rubinfeld, 1981). It also seems more meaningful to analyze the verbal and quantitative SCAT scores separately in order to determine which specific skills are apt to be relatively more important to the scoring on the TUC and NIP. The low relationship between education and the TUC score may be caused by any number of factors; for example

1. Education does not reveal nursing aptitude.
2. Most observations are twelfth grade.
3. Different levels of skills exist in different school districts.
4. The quality of classes taken and performance in those classes varies widely.

In order to validate any sort of conclusions, the statistically tangible technique of multiple regression was used. The results obtained are given in Table 2.

TABLE 1

Correlation Matrix

	AGE	EDUC.	SCAT	SCAT V	SCAT Q	WUND.	TUC	NIP
AGE	1.000							
EDUC.	-0.163	1.000						
SCAT	0.105	0.248	1.000					
SCAT V	0.270	0.096	0.813	1.000				
SCAT Q	-0.115	0.285	0.730	0.235	1.000			
WUND.	0.066	0.145	0.687	0.577	0.509	1.000		
TUC	0.223	0.151	0.617	0.630	0.314	0.484	1.000	
NIP	0.193	0.012	0.565	0.671	0.218	0.552	0.685	1.000

TABLE 2

Multiple Regression Results on TUC Scores

VARIABLE	COEF B(STD.V)	B	STD.ERROR(B)	T
AGE	0.1074	2.8401E-01	2.0595E-01	1.379
EDUC.	0.0658	1.8066E+00	2.1101E+00	0.856
SCAT V	0.4989	4.9564E-01	9.2614E-02	5.352
SCAT Q	0.1341	1.4198E-01	9.3350E-02	1.521
WUND.	0.1117	6.4822E-01	5.8607E-01	1.106
CONSTANT	0	-1.8399E+01	2.7853E+01	-0.661

Level of Significance for TUC

	One Tail	Two Tails
	% Level of Significance	% Level of Significance
Age	≈91	≈80
Education	≈80	≈60
SCAT-V	99.9	99.5
SCAT-Q	≈93	≈87
Wonderlic	≈86	≈73
Constant		≈49

The level of significance dictates the degree of certainty to which the independent variable has some statistically explanatory ability on the dependent variable.

The one tail test statistics are given since we do have a priori reasoning to expect a positive relationship. That is, if a student scores well on one test, it is likely he will score well on another of the same type. For age and constant, however, there is not a priori reasoning, but the statistics are included.

In most statistical analyses, the arbitrary level of significance is 95%, corresponding to a t-statistic of approximately 1.671 on a one tail test and 2.0 on a two tail test. In this regard, only the verbal portion of the SCAT test proved to be a statistically significant variable. Performing a simple regression produced the statistics shown in Table 3.

The regression line defined here puts forth the hypothesis that our best "guess" as to what the TUC percentage score

TABLE 3

Results Obtained by Simple Regression

COEF

VARIABLE	B(STD.V)	B	STD.ERROR(B)	T
SCAT V	0.6301	6.2601E-01	7.3900E-02	8.471
CONSTANT	0	2.4199E+01	4.5204E+00	5.353

ANOVA

SOURCE	SS	DF	MS	F
REGRESSION	2.70071E+04	1	2.70071E+04	71.76
RESIDUALS	4.10226E+04	109	3.76354E+02	
TOTAL	6.80297E+04	110	6.18452E+02	

SUMM

	MULTIPLE R	R-SQUARE
UNADJUSTED	0.6301	0.3970
ADJUSTED	0.6257	0.3915

STD. DEV. OF RESIDUALS = 1.9400E+01

N = 111

for the individual is .62601 x the percentage score on the SCAT-V section plus a constant of 24.199. Statistically this is legitimate but viewed logically, hardly practical. What in essence is being said is that no one should score below 24.199%. Ideally, the constant in this regression should not be statistically different from 0 (t-stat $< \begin{matrix} 2.0 \\ 2.0 \end{matrix}$). If it is significantly different than 0, what we are essentially revealing is that the model is misspecified.

Also of low practicality is the predicting capability of this model. A 95% confidence interval is defined by a range to which one is 95% confident that a student's TUC score will be within an upper and a lower bound. This corresponds to a range of ± 2 standard deviations or about ± 38.8. This leaves a range of over 77 percentiles, hardly practical for predictive purposes.

The same procedure used to analyze TUC scores was then utilized to examine NIP scores. The correlation coefficients are interpreted as follows:

Age (.193) and Education (.012) have little or no correlation with NIP scores.

SCAT-Q (.218) has slight positive correlation.

SCAT (.565) and Wonderlic (.552) have substantial positive relationship.

SCAT-V (.671) and TUC (.685) show strong useful relationship.

Numbers in parentheses are correlation coefficients.

The TUC score is used because it is the only actual nursing test score available to the researcher. The multiple regression results on NIP scores are shown in Table 4.

Level of Significance for NIP

	One Tail	Two Tails
	% Level of Significance	% Level of Significance
Age	65	29
Education	92.28	84.56
SCAT-V	99.5	99
SCAT-Q	85	70
Wonderlic	99	98
TUC	99.9	99.5
Constant		87

The level of significance dictates the degree of certainty to which the independent variable has some statistically explanatory ability on the dependent variable.

Using only the significant variables, SCAT-V, Wonderlic and TUC, a multiple regression was performed. The results are in Table 5.

Examining the slope coefficients tells us that:

(a) For every percentage point change on the SCAT-V, NIP changes .31785 of a percentage point;

(b) for every percentage point change on the Wonderlic, NIP changes 1.0253 percentage points; and

(c) for every percentage point change in the TUC, NIP changes by .040305 of a percentage point.

TABLE 4

Multiple Regression Results on NIP Scores

COEF VARIABLE	B(STD.V)	B	STD.ERROR(B)	T
AGE	-0.0253	-6.7433E-02	1.7857E-01	-0.378
EDUC.	-0.0965	-2.6685E+00	1.8195E+00	-1.467
SCAT V	0.3061	3.0642E-01	8.9784E-02	3.413
SCAT Q	-0.0785	-8.3651E-02	8.1095E-02	-1.032
WUND.	0.2238	1.3080E+00	5.0653E-01	2.582
TUC	0.4287	4.3190E-01	8.3860E-02	5.150
CONSTANT	0	3.7498E+01	2.3984E+01	1.563

TABLE 5

Multiple Regression Results

Significant Variables Only

COEF

VARIABLE	B(STD.V)	B	STD.ERROR(B)	T
SCAT V	0.3176	3.1785E-01	8.7667E-02	3.626
WUND.	0.1754	1.0253E+000	4.5445E-01	2.256
TUC	0.4001	4.0305E-01	8.2394E-02	4.892
CONSTANT	0	7.9891E+00	8.6693E+00	0.922

ANOVA

SOURCE	SS	DF	MS	F
REGRESSION	4.03230E+04	3	1.34410E+04	50.09
RESIDUALS	2.87137E+04	107	2.68352E+02	
TOTAL	6.90367E+04	110	6.27606E+02	

SUMM

	MULTIPLE R	R-SQUARE
UNADJUSTED	0.7643	0.5841
ADJUSTED	0.7566	0.5724

STD. DEV. OF RESIDUALS = 1.6381E+01

N = 111

The constant is not sufficiently different from zero which means that if a student scores "0" on the SCAT-V, Wonderlic and TUC, there is no reason to believe that he will score above a "0" on the NIP.

Making an actual prediction suffered the same problem that predicting TUC did. The standard 95% confidence interval of ± 2 standard deviations of residuals would mean a maximum range of 65.5, still quite impractical.

CHAPTER V

CONCLUSION

The purpose of the study was to identify any correlation between the variables (SCAT and Wonderlic) and student scores on the National League for Nursing Practical Nursing three Units of Content (TUC) and Nursing including Pharmacology (NIP) tests.

Of all relationships examined, the only statistically recognizable ones were those between the SCAT-V score and the TUC score and between SCAT-V, Wonderlic and TUC vs. the NIP score. The prime objective of this study was to determine if relationships occur between SCAT scores, Wonderlic scores, TUC and NIP scores. Some relationships are present; however, interpretation toward usage of these results must be made carefully and in a very general manner. No actual predictions of scores should be made but if an instructor wished to improve the standing of his students, he would certainly realize that a good place to start would be basic verbal skills such as those being tested in the SCAT. One must also realize that some variables not statistically significant in this study may be relevant when more data are collected.

These variables may, for instance, include the SCAT-Q scores to measure TUC. Relationships can be drawn from this study, but no specifics can be sifted free.

This study demonstrated to the author that the testing required of students prior to admission was nothing more than a requirement. The tests prescribed were ineffective predictors of student success in the program.

REFERENCES

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Wonderlic, E.F. Wonderlic personnel text manual. Northfield, Illinois. E.F. Wonderlic & Associates, Inc., 1966.

HISTOGRAM

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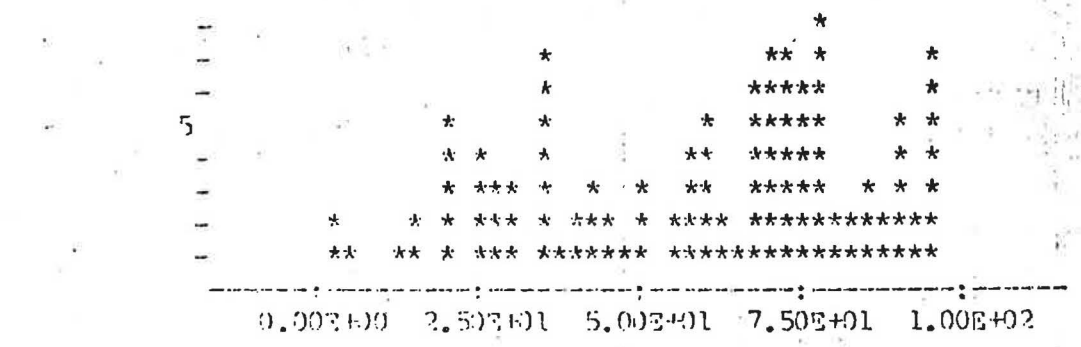

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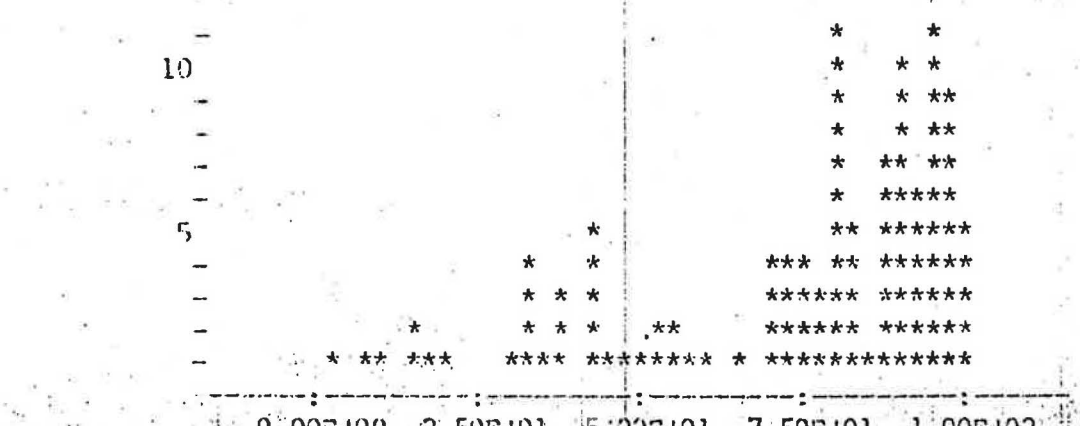

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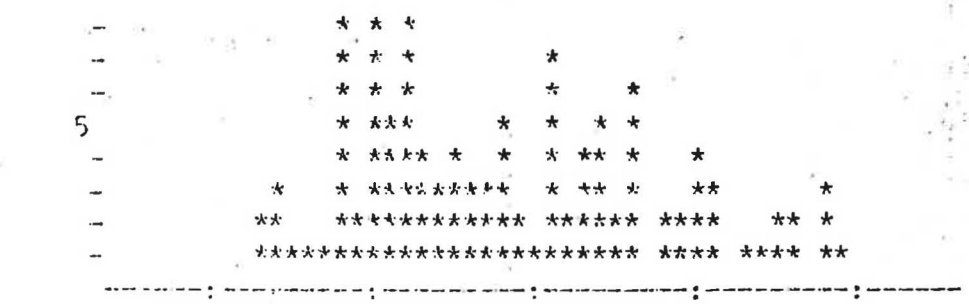

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HISTOGRAM

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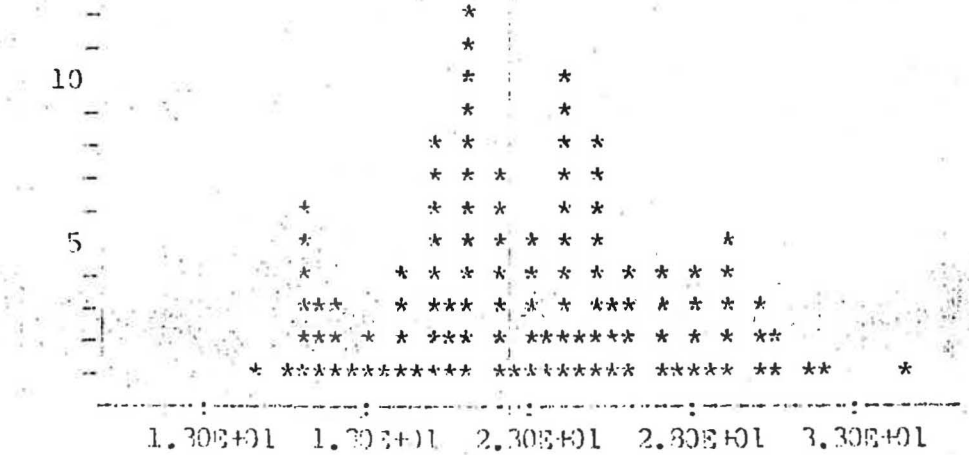

WIND.

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